



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/078,817	02/19/2002	Douglas R. Manley	10011387-1	7130

7590 09/13/2004

AGILENT TECHNOLOGIES, INC.
Legal Department DL429
Intellectual Property Administration
P.O. Box 7599
Loveland, CO 80537-0599

EXAMINER

TRIMMINGS, JOHN P

ART UNIT	PAPER NUMBER
----------	--------------

2133

3

DATE MAILED: 09/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/078,817

Applicant(s)

MANLEY ET AL.

Examiner

John P Trimmings

Art Unit

2133

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☒ Claim(s) 21-25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claims 1-32 are presented for examination.

Specification

1. The disclosure is objected to because of the following informalities:
 - a. Page 8 line 11; "504" should instead recite, "304".
 - b. Page 20 contains references to "BUFF" and "buff" in lines 4, 5, 10 and 14. The examiner requests that the applicant resolve the discrepancy between "BUFF", and "buff" with reference to "BUF" in FIG.6.
 - c. Page 22 line 11; "IF" should instead recite, "PBIF".

Appropriate correction is required.

Claim Objections

2. Claims 21-24 are objected to because of the following informalities: The claims are most likely dependent upon Claim 20 and not Claim 19 as is recited. Appropriate correction is required.
3. Claim 25 is objected to because of the following informalities: line 3 should recite; "corresponding [to] at least some portions". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 19 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim contains subject matter that was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. A "lack of procedural content and process calls" in regards to the dataflow model (in Claim 19) was not disclosed within the specification, and therefore one with ordinary skill in the art at the time of the invention, would not have been able to execute the claim.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1, 7, 16, 22, 25 and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims recite "at least some..." of either portions of a data transmission path, counters, or a dataflow model. The quoted phrase is not a distinct limitation of the claim and therefore renders the claims indefinite.

6. Claims 22-24 recite the limitation "said reasoning engine" in each claim. There is insufficient antecedent basis for this limitation in the claim.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-5 and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Braun, U.S. Patent No. 4462099.

As per Claims 1 and 28:

Braun teaches a method for diagnosing faults in a system under test (SUT) (column 1 lines 7-8 and lines 54-58), the SUT defining data transmission paths through which data are transferred (see FIG.1), said method comprising: identifying at least some portions of the data transmission paths of the SUT capable of introducing errors in data transfer (FIG.1 and column 1 lines 54-58 and column 8 lines 26-29); providing constraints defining relationships of at least some of the portions of the data transmission paths identified (column 7 lines 45-52); and diagnosing the SUT with respect to the constraints (column 1 lines 54-58).

As per Claim 2:

Braun further teaches a method based on a dataflow model corresponding to the SUT (see FIG.1), the dataflow model including edges (FIG.1 12, 13, 14), each of which corresponds to a portion of one of the data transmission paths of the SUT capable of introducing errors in data transfer (column 5 lines 46-47).

As per Claim 3:

Braun further teaches the method of claim 2, wherein the dataflow model includes vertices (FIG.1 10.1-10.4), each of the edges being defined between two of the vertices (FIG.1).

As per Claim 4:

Braun further teaches the method of claim 3, wherein each of the vertices is at least one of a termination of an edge (FIG.2 12, 13) and representative of a location where an operation with respect to data can occur (FIG.2 12', 13').

As per Claim 5:

Braun further teaches the method of claim 4, wherein the operation corresponding to a vertex includes at least one of dropping data, splitting data, routing data, replicating data and combining data (column 7 lines 35-36).

8. Claims 15-17, 19-22 and 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Sasin et al., U.S. Patent No. 6011830.

As per Claim 15:

Sasin et al. teaches a method for diagnosing faults in a system under test (see Abstract), said method comprising: providing a dataflow model representative of the SUT (Abstract), the dataflow model including information corresponding to a relationship of error detection capabilities of the SUT (column 6 lines 37-41, column 7 lines 6-16); and diagnosing the SUT with respect to the dataflow model (column 14 lines 7-27).

As per Claims 16 and 17:

Sasin et al. further teaches the method of claim 15, wherein diagnosing the SUT comprises: providing constraints defining relationships of at least some of the portions

of the dataflow model and generating information indicative of the manner of failure (column 14 lines 28-40).

As per Claim 19:

Sasin et al. does not specify anywhere in the disclosure the method of claim 15, wherein the dataflow model consists of procedural content and process calls, therefore the claim is rejected.

As per Claim 20:

Sasin et al. teaches a system for diagnosing faults in a system under test (see Abstract), said system comprising: a dataflow model representative of error detection capabilities of the SUT (column 6 lines 37-41, column 7 lines 6-16); and a reasoning engine associated with said dataflow model, said reasoning engine being adapted to evaluate test results corresponding to the SUT in relation to said dataflow model (column 21 lines 20-67, column 22 lines 1-23).

As per Claim 21:

Sasin et al. further teaches the system of claim 20, wherein said dataflow model is a directed graph including edges and vertices (example: FIG.4c), each of said edges corresponding to at least a portion of a data transmission path of the SUT through which an error can be introduced (column 6 lines 37-41, column 7 lines 6-16); each of said edges being defined by two of said vertices (example: FIG.4c).

As per Claim 22:

Sasin et al. further teaches the system of claim 20, wherein said reasoning engine is adapted to evaluate the test results of the SUT with respect to constraints, the

Art Unit: 2133

constraints defining relationships of at least some of the portions of the dataflow model (column 21 lines 20-67, column 22 lines 1-23).

As per Claim 24:

Sasin et al. further teaches the system of claim 19, further comprising: an SUT communicatively coupled to at least one of said dataflow model and said reasoning engine (FIG. 1a).

As per Claim 25:

Sasin et al. teaches a system for diagnosing faults in a system under test (see Abstract), said system comprising: means for receiving test results corresponding at least some portions of data transmission paths of the SUT (FIG. 3a BD-INT); and means for diagnosing the SUT with respect to constraints defining relationships of at least some of the portions of data transmission paths of the SUT (FIG. 3b TCG-F).

As per Claim 26:

Sasin et al. further teaches the system of claim 25, wherein said means for diagnosing includes means for analyzing the SUT with respect to a dataflow model (column 14 lines 7-27).

As per Claim 27:

Sasin et al. further teaches the system of claim 25, further comprising: means for testing the SUT to generate test results (FIG. 1a TCG).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 6-10, 12-14 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Braun, U.S. Patent No. 4462099, as applied to Claim 1, and in view of Sasin et al., U.S. Patent No. 6011830.

As per Claims 6, 29 and 30:

Braun fails to further teach analyzing results with respect to the dataflow model. But in an analogous art, Sasin et al. does teach this feature wherein the SUT test results are received (FIG.3b to BD-INT) diagnosing comprises analyzing results (FIG.3b CMP, column 14 lines 7-27) associated with a time of error. And in column 5 lines 8-18, the advantage cited is that of a test system which quickly performs complex operational tests while conforming to real conditions. One with ordinary skill in the art at the time of the inventions, motivated as suggested, would find it obvious to combine the techniques of Sasin et al. with the method of Braun in order to provide superior testing of a transmission system.

As per Claim 7:

Braun further teaches the method of claim 6, wherein the SUT includes counters corresponding to at least some of the edges of the dataflow model (FIG.2 35); and further comprising: receiving information, corresponding to the test results, from at least

some of the counters (FIG.2 41 and column 6 lines 41-54). And in view of the motivation previously stated for Sasin et al., the claim is rejected.

As per Claim 8:

Braun further teaches the method of claim 6, wherein the dataflow model is a directed graph (FIG.1 and column 4 lines 44-49). And in view of the motivation previously stated, the claim is rejected.

As per Claim 9:

Sasin et al. further teaches the method of claim 6, wherein analyzing the test results comprises: receiving information corresponding to failed data transfers; and identifying portions of the SUT potentially associated with the failed data transfers (column 39 lines 6-20). And in view of the motivation previously stated, the claim is rejected.

As per Claim 10:

Sasin et al. further teaches the method of claim 9, wherein analyzing the test results comprises: exonerating portions of the SUT initially identified as being associated with the failed data transfers if those portions of the SUT are determined not to have initiated at least one of the failed data transfers (column 26 lines 15-67). And in view of the motivation previously stated, the claim is rejected.

As per Claim 12:

Braun further teaches the method of claim 1, wherein the constraints correspond to data flow characteristics of the SUT exhibited with respect to the vertices (column 7 lines 37-52). But Braun fails to teach specifics of the dataflow model. Sasin et al. does

Art Unit: 2133

teach the features lacking in Braun, wherein identifying comprises providing a dataflow model corresponding to the SUT (see Abstract), the dataflow model including edges and vertices (column 14 lines 48-67 and column 15 lines 1-16), each of the edges corresponding to a portion of one of the data transmission paths of the SUT capable of introducing errors in data transfer (column 6 lines 37-41, column 52 lines 44-50, column 54 lines 15-21), each of the edges being defined between two of the vertices (column 16 lines 30-65). And in view of the motivation previously stated, the claim is rejected.

As per Claim 13:

Braun further teaches the method of claim 12, wherein at least one of the constraints of at least one of the vertices relates that an amount of data flowing into the vertex corresponds to an amount of data flowing from the vertex (1st pre-set error of column 7 lines 45-47). And in view of the motivation previously stated, the claim is rejected.

As per Claim 14:

Braun further teaches the method of claim 13, wherein the amount of data flowing into the vertex corresponds to an amount of good data flowing into the vertex (column 7 lines 35-36 wherein any error signal is discarded). And in view of the motivation previously stated, the claim is rejected.

As per Claims 31 and 32:

Braun fails to further teach the diagnosis system of claim 28, wherein said logic configured to diagnose includes logic configured to identify portions of the SUT potentially associated with failed data transfers, and said logic configured to diagnose

includes logic configured to exonerate components initially identified as being associated with the failed data transfers. But Sasin et al. teaches these features in column 3 lines 8-21 (data transfers), and column 26 lines 15-67 (resetting states). And in view of the motivation previously stated, the claim is rejected.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Braun, U.S. Patent No. 4462099, and in view of Circo, U.S. Patent No. 4677614. As applied to Claim 1, Braun fails to specifically claim that, wherein diagnosing the SUT comprises: receiving information regarding data transfers with respect to the portions identified, the information being obtained via cyclic redundancy checking. But in an analogous art, Circo does teach this feature (see FIG.1 A25 SDLC, and column 10 lines 6-34). And column 1 lines 18-60 recite the advantage that the invention gives more reliable service by eliminating reliance on one master node. One with ordinary skill in the art at the time of the invention, motivated as suggested, would find it obvious to combine the characteristics, including CRC checking, to the device and method of Braun.

12. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasin et al., U.S. Patent No. 6011830, and in view of Circo, U.S. Patent No. 4677614. As applied to Claim 17, Sasin et al. fails to further teach the method using CRC. But Circo does teach this, wherein the flow of data is a flow of data packets (column 12 lines 16-40); and wherein diagnosing the SUT further comprises: analyzing information acquired via cyclic redundancy checks performed at various locations associated with the flow of data (column 12 lines 47-59). And in view of the motivation previously stated, the claim is rejected.

Art Unit: 2133

13. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sasin et al., U.S. Patent No. 6011830, in view of Braun, U.S. Patent No. 4462099. Sasin et al. fails to teach the system of claim 20, wherein said reasoning engine is adapted to receive information corresponding to failed data transfers and identify portions of the SUT potentially associated with the failed data transfers. But in the analogous art of Braun, this feature is taught in column 1 lines 54-58 and column 8 lines 26-29. The advantage of this invention (Braun), as per column 1 lines 54-58, is to provide a means of identifying the source of data errors in a transmission system. One with ordinary skill in the art at the time of the invention, motivated as suggested, would provide to Sasin et al. the error detecting means of Braun in order to facilitate locating faulty units.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

14. Claims 1-7, 9, 10, 25 and 27-32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over

claims 1-5, 7-8 and 21-27 of copending Application No. 2003/0177416. Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims of the co-pending application anticipate the above-mentioned claims of the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John P Trimmings whose telephone number is 703-305-0714. The examiner can normally be reached on Monday through Thursday, 7:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on 703-305-9595. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Application/Control Number: 10/078,817
Art Unit: 2133

Page 14



John P Trimmings
Examiner
Art Unit 2133

jpt



GUY J. LAMARRE
PRIMARY EXAMINER